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ABSTRACT

Inservice technical upgrading of postsecondary vocational-technical instructors is a major problem for vocational-technical education. Staff development programs for these personnel are needed, but are often difficult to locate or to create. This paper is designed to provide persons involved in staff development or preparing a staff development program with information on research and development, types of programs/activities, consortiums and associations, principles for technical upgrading, and recommendations. References given are to be used as initial information upon which to locate other resources. The document reviews 10 studies on postsecondary vocational-technical staff development with their results and sources for further reference. It also contains lists of types of programs and means for technical upgrading, guidelines for model technical upgrading, examples of forms used for school-business agreements for technical upgrading, and recommendations of resources and associations for further information. (KC)

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PRINCIPLES & SOURCES
for a
MODEL FOR TECHNICAL UP-GRADING

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C. R. Doty

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

In 1976 a national conference was conducted concerning postsecondary staff development. (Doty and Gepner (Eds.)) George Storm, Ferris State College, Michigan, was given the task of describing the "state of the art" of inservice technical upgrading of postsecondary technical instructors for that conference. It was found to be the most ignored area of staff development. An ERIC computer search revealed only three sources and these seemed of little use. Storm, however, surveyed via telephone almost every state and produced a comprehensive report. In his opening paragraph of that report he summarized the situation:

> As we view the existing pattern of technical upgrading programs for post-secondary vocational-technical instructors we can't help but look with awe at the wide variety of professional improvement opportunities that exist in most occupational fields. The opportunities are there, but they are not being utilized to their best advantage. (p. 237)

By October 1981 a search of the literature revealed more attention to technical upgrading, although not what one might expect for such an important problem. The problem is emphasized in the May 1981 Technical Insider concerning staff development and the technical educator:

> The ever-intensifying need for staff development, coupled with reductions in spending for development, call for creativity in keeping faculty members productive and up-to-date in their technical specialities. (p. 30a)

William D. McLean in 1979 in explaining the purpose of the National Association of College Automotive Teachers wrote:

> Who will train the mechanics to service these new vehicles? You know the answer.
>
> The manufacturers will continue to make technical literature available and provide free training for automotive teachers at company centers. Textbook publishers will continue to issue revised editions. But much of the task of getting up to date and staying there will necessarily devolve upon the individual instructor. (p. 15)

Quoting from the article Revitalization for Technical Educators:

> > How can a technical educator best keep abreast of current technological changes and advances? How does a teacher of a specific technology keep current in his or her respective field while at the same time maintaining a responsible, accountable posture in the classroom? (Aug. 1980, 7)

The answer to this question is found in the Return to Industry Policies and Procedures manual of Spartanburg Technical College, "It is impossible to maintain a regular teaching load and to gain realistic knowledge of the day-to-day working world at the same time." (undated, 1)

Nelson (1977) asked a vital question then answered it. "Won't faculty development soon be a topic of the past, as in typical American fashion we turn our attention to something new in the next decade? Hardly! Faculty development will be more important than ever in the 1980's (143)

This paper, in response to the need for technical upgrading staff development programs has been prepared to give the person involved in staff development or preparing a staff development program, information on research and development, types of programs/activities, consortiums and associations, principles for technical upgrading, and recommendations. The references given are not based on a comprehensive search but may be used as initial information upon which to locate other resources.

RESEARCH AND DEVELOPMENT

Barbara Kline, (1981) National Center for Research in Vocational education, developed a model return-to-industry program for instructors at two year postsecondary institutions for her doctoral dissertation. The model involves five stages through which both the instructor and the business/industry progress. These steps are: 1) awareness, 2) commitment, 3) preparation, 4) participation, and 5) impact.

Catherine Warmbrod, et al., (1981) produced Sharing Resources: Postsecondary Education and Industry Cooperation. Within this publication are descriptions of 219 exemplary programs and practices of postsecondary occupational education and industry collaboration across the country. Forty eight programs are described in detail i.e., implementation, procedures, contributions by the colleges, benefits to the industries, benefits to the colleges, and elements for success. A section on guidelines for cooperation is included.

Anderson (Aug. 1979) administered the Teacher In-Service Preference Questionnaire to 440 instructors. Ninety four persons with 0-4 years of teaching experience and ninety eight persons with 20+ years of experience replied. He found that the least experienced instructors preferred workshops and demonstrations the most and conferences, institutions, and conventions the least. Experienced instructors preferred workshops and institutes the most while rating conferences and demonstrations the least. A conclusion from this study is that workshops emphasizing demonstrations are the preference of lesser experienced teachers. Workshops and institutes where information is exchanged more verbally are preferred by more experienced instructors. Workshops were preferred most by both groups of instructors.

Dieffenderfer, et al. (June 1977) produced eight resource handbooks for improving linkages with business, industry and labor. Eight topics featured were staff development, advisory committees, cooperative internships, personnel exchange programs, workshops, site visits, resource persons and program support. Included within these publications is an analysis of the approaches to staff development, i.e., staff, committee, administrator, and individual. A planning sequence for developing the programs is also included.

Kolendrianos (1977) investigated the inservice education activities and opinions of full-time occupational instructors in the Virginia Community College System. He studied the needs for inservice education of the instructors as perceived by deans of instruction and occupational-technical division chairpersons. A mail survey was sent to a random sample of 120 full-time instructors and all of the administrators. The results show the most widely used inservice education activities were reading occupational and professional journals, meeting other instructors formally and informally, meeting with sales persons in the occupational speciality area, and formal staff meetings. The least utilized activities were meeting with consultants, attending state-level professional education association meetings, and meeting with instructors from four year colleges for accomplishing program development and articulation. Kolendrianos reported the three most popular opinions of instructors in regard to inservice needs were that the instructor should have a selection of activities that will strengthen professional competence, that special orientation activities for new staff be provided, and that credit be given for participation in inservice activities. In addition, the main point expressed by instructors and administrators was that focus be given to new developments in one's specialty, preparing instructional materials, and techniques to maintain student retention.

Storm (1976) conducted a nationwide survey that indicated widespread and nearly unanimous interest in technical upgrading of postsecondary professional personnel. He reported that, in spite of this positive interest, few postsecondary institutions have inservice programs that satisfactorily serve the technical upgrading needs of their respective instructors and administrators. He also reported that postsecondary institutions in almost 50 percent of the states were exempt from teacher certification requirements; and even in states where they were applicable, the requirements were frequently fulfilled through advanced education, administration, or supervision courses and workshops which did not fulfill the objective of technical upgrading. Storm's study and corresponding journal article were used to examine the problem of balance between pedagogical and technical skills. (Doty, et al, 1980, 68-69)

Kotula (1976) wrote the group report on inservice personnel education for the National Conference on Personnel Development for Postsecondary Vocational and Technical Education Programs. The study group identified five priorities for establishing programs: 1) needs assessment, scope and setting goals, 2) establishing an administrative organization, 3) developing an annual program and establishing a schedule, workload, and time for inservice education, 4) establishing climate, credibility, and motivating staff, and 5) identifying resources (funding, personnel) for the programs. Questions for each priority were stated which must be answered. Short and long term improvements expected from the programs were stated. Personnel development objectives at national, state, and local levels were identified. Motivational techniques to ensure staff participation were recommended.

Doty and Gepner (1976 a and b) prepared a two-volume reference source for the United States Office of Education in response to a national problem of personnel development for postsecondary vocational and technical education programs of less-than-baccalaureate degree. The national survey attempted to locate continuous, quality staff development programs offered at community colleges and technical institutes. Forty-five program experts produced review

and synthesis papers on preservice and inservice faculty development, administration, adjunct faculty, teaching strategies, technical upgrading, nontraditional students, and/or descriptions of their programs. Comprehensive annotated bibliographies were included on the topics previously mentioned, and the national conference structure and evaluation were given. Their basic finding was that technical teachers will participate in teacher education activities if there is administrative support and if there is some reward for such participation. They also will pursue those activities which improve technical competence rather than teaching competence, even though their supervisors may regard teaching competencies as equally important as technical competency. (Doty, et al, 1980, 69-72)

Bloom (1974) studied occupational teachers' participation in professional growth activities in the Illinois community colleges. A stratified random sample of 375 teachers produced a 77.6 percent return (290). Bloom reported the most widely used activities were reading occupational and professional education journals, meeting with other occupational instructors formally and informally, observing employees in their occupational area, and formal staff meetings. Inservice activities least used were both long- and short-term institutes or workshops, national association meetings, and research. Bloom found that sex, hours of work per week, the number of years of work experience, size of campus, distance from a college or university, age, or recency of a teacher's participation in preservice education made no difference in occupational teachers participation in professional growth activities. On the other hand, the higher the level of education, the more years of teaching experience, and the teacher's perception that administration supports inservice education did influence teachers to participate. (Doty, et al, 1980, 69-70)

Kruk (1974) based his study on the perceptions of junior college technical education teachers and their supervisors. His survey yielded returns from 189 teachers and fifty-six supervisors from twenty colleges in Florida. The opinions expressed showed that the teachers and supervisors were willing to participate in inservice activities either as students or as instructors. Their opinions toward this activity were directly related to the fact that they had recently participated in such activities. A major finding was that there is a more pronounced dissatisfaction with present professional and technical inservice education practices by teachers than by the supervisory groups.

TYPES OF STAFF DEVELOPMENT PROGRAMS/ACTIVITIES

George Storm in his "State of the Art" for in-service technical upgrading of postsecondary vocational-technical instructors defined five categories of programs:

1. Workshops at Technical Education Institutions
2. Industry and Business Sponsored Workshops
3. Workshops Sponsored by Technical Societies and Labor Organizations
4. State Department of Education Sponsored Workshops
5. Work Experience Programs in Business and Industry (1976, 238)

A review of the literature reveals the following means for technical upgrading which may be classified within the above categories:

Advisory Committees
Conferences
Consultants
Conventions
Cooperative internships
Correspondence courses
Courses/workshops (Univ./College)
Demonstrations
Faculty residencies
Fellowships
Industrial/Business courses and workshops
Industrial leave program
Industry-education exchange program
Institutes
Leaves of absence
Mini sabbaticals
Personnel exchange programs
Professional days
Provision for released time
Reading technical journals
Return to industry
Sabbaticals
Salespersons
Seminars
Short term leaves
Summer institutes
Technical society courses/workshops
Time built into term schedule
Travel to business and industry
Visits to business and industry
Work experience programs in business and industry
Workshops

GUIDELINES FOR MODEL TECHNICAL UPGRADING

FUNDING

Three percent (3%) of the institutional total budget should be spent on staff development and curriculum development.

Participants should be kept on full pay and benefits by the educational institution.

Expenses, e.g., tuition, travel, should be paid by the educational institution.

The business/industry need not pay any wage or salary to the instructor.

Start up funding might be obtained via P.L. 89-329, Higher Education Act of 1965, Title III - Strengthening Developing Institutions.

BUSINESS/INDUSTRY/LABOR

Business, industry and labor must be convinced this program is not a recruitment strategy for employees.

A signed agreement among the institution, instructor, industry and union must be accomplished prior to the instructor engaging in technical upgrading. ((Spartanburg Agreement)

Union requirements must be satisfied.

Business/Industry/Labor must be oriented concerning the goals of the educational institution and the staff development program.

Personnel from business, industry, and labor should be used to assist the instructor in analyzing, 1) what is required on the job, i.e. task analysis, DACUM, and 2) what areas the instructor needs upgrading. (The instructor cannot do this job analysis and self analysis alone.)

COMMITMENT

The board of trustees, president, and other administrators should publicly proclaim their commitment to faculty development.

A policy manual should be written and approved that identifies the benefits to the individual as a result of participation in faculty up-grading in terms of promotion, rank, salary, work load, tenure, professional recognition. The goals of the institution and program are to be included.

Once started the program must be continuous.

Faculty must be involved in approval, planning, implementing, and evaluating the program.

SPARTANBURG TECHNICAL COLLEGE

RETURN TO BUSINESS/INDUSTRY AGREEMENT

This agreement made and entered into by _____ (Instructor) and between _____ (Name of Business/Industry) and Spartanburg Technical College.

WITNESSETH: The above-named employer has formed an agreement for the purpose of providing an opportunity for our instructor to return to Business/Industry in order that he or she may update his or her technical knowledge and skills which will improve curriculum content at Spartanburg Technical College.

FIRST: The return to Business/Industry is for the period_____ through_____.

SECOND: The instructor shall be placed in a business or industry relevant to his or her area of technical expertise.

THIRD: The instructor is covered by Workmen's Compensation through the State of South Carolina. If an accident occurs during this period, it should be reported to Spartanburg Technical College's Personnel department. The First Report of Injury will be submitted to the college by the employer. The claim will be processed by the college Personnel Office. The employer is not liable for any Workmen's Compensation claims for this instructor.

FOURTH: The employer will not make any wage or salary payments to the instructor. The instructor remains an employee of the college and is paid by the college. The employer may or may not maintain personnel records on the instructor.

FIFTH: It is understood that the instructor will return to his or her regular duties at Spartanburg Technical College at the end of the period specified in the agreement.

This Return to Business/Industry Agreement is entered into according to the foregoing provisions on this _____day of _____, 19 .

_____
Instructor
Spartanburg Technical College

_____
President

Spartanburg Technical College
P. O. Drawer 4386
Spartanburg, S. C. 29303

_____
Employer

_____
Title

_____
Company Name

_____

_____

_____
Company Address

TECHNICAL UP GRADING PROGRAM

The program should not be used for reward and punishment.

Begin the program with volunteers

The program should be for all faculty in the institution, not just technical faculty. A separate program for technical faculty will cause interinstitutional conflicts among the different faculty groups.

A balance should be achieved between individual upgrading activities and college wide activities to prevent compartmentalization. (Nelson, 1979, 145). That is, the faculty member must be educated in his/her total responsibility to institutional needs.

The program must be evaluated in, at least, the areas of change in curricula, student progress, and teacher morale and retention.

A justification paper might be prepared which could be used to determine allocation of institutional resources. (see Return to Industry Proposal)

INSTITUTIONAL STAFF DEVELOPMENT OFFICER

An institutional staff development officer should be appointed whose main responsibility is staff development.

The officer should not be assigned other responsibilities which cause staff development to be a second priority.

The staff development office should not be used as a position to place a staff member displaced from his/her regular job - unless that person does believe in staff development.

A person evaluating personnel for promotion, tenure, salary, etc., should not be assigned the position of staff development officer.

The staff development officer should never report a faculty member's progress to those responsible for evaluation. The staff development officer's role is to assist the faculty member in overcoming any deficiencies revealed in the evaluation process.

INDIVIDUAL FACULTY MEMBER

The program should be based upon an assessment of individual faculty needs.

Do not expect an individual to volunteer until the administration has an approved statement of personal benefits.

Offer what the individual prefers first.

Asking a faculty member what is needed may not be sufficient. The individual will need help in assessing where he/she is and where he/she needs to be.

HAGERSTOWN JUNIOR COLLEGE*

Hagerstown, Maryland

Criteria for Evaluating
Return to Industry Proposals

Return to Industry projects are selected for funding using the following criteria:

_____1. The length of time that an instructor has been out of the industrial setting.
10 points

_____2. A description of the technological advances or revisions that have occured within the industry since the instructor last worked in the industry which change significantly that industry's production design or delivery system.
15 point.

_____3. Demonstration that the changes within the industry are related to skills or knowledge needed by the student and, therefore, required of the instructor.
15 points

_____4. Availability and willingness of an industry to provide the learning experience needed by the instructor. The proximity of the industry and comprehensiveness of the experience will be taken into consideration.
10 points

_____5. The comprehensiveness of the industrial experience package prepared by the instructor. Particular attention will be paid to the integration of the industrial learning experience and the skills and knowledge to be transmitted to the students.
10 points

60 points total

*(Parsons, M.L., 1979, Appendix B)

Do not expect a faculty member who has become involved in technical upgrading to be satisfied with out-dated equipment.

A person who is not regularly scheduled for upgrading may become insecure and may use the program eventually for becoming updated and leaving education.

Personnel from business, industry, and labor who are to be involved in industry-education programs must have clear policy statements concerning their leave of absence, job seniority, wages, and fringe benefits. Certification requirements for teaching must also be solved and a thorough orientation for teaching conducted.

RECOMMENDATIONS

It is recommended that anyone involved or planning to be involved in staff development, particularly technical upgrading, should examine the publications of Dieffenderfer, et al. (1977), Warmbrod, et al. (1981), Kline (1981), and Doty and Gepner (1976), especially the reports by Kotula and Storm. In order to keep up to date on available materials and ideas membership in the AACTion Consortium, the National Council for Staff, Program and Organization, the Council for Occupational Education, the National Association of Industrial and Technical Teacher Educators, and the National Association of Instructional Leaders in Technical Education seems highly desirable.

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